Proposed

Facility name: Findett Corporation

Location: St. Charles, Missouri

EPA Region: Region VII

Person(s) in charge of the facility: Milton Tegethoff, President

Name of Reviewer: Diana J. Bailey Date: 5/15/84

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Findett Corporation recycled PCB fluids until prohibited by regulatory changes. Contaminated soil from the qunch pond itself, has been removed by excavation, drumming and approved disposal.

Scores: $S_M = 38.2$ ($S_{gw} = 65.62$ $S_{sw} = 7.97$ $S_a = 0$)

$S_{FE} = 0.0$

$S_{DC} = 12.5$

FIGURE 1
HRS COVER SHEET

0795

1.0

OU00

Q A'd
A Pla
A 5/22/84

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 (45)	1	45	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 3	2		6	
Net Precipitation	0 1 2 3	1		3	
Permeability of the Unsaturated Zone	0 1 2 3	1		3	
Physical State	0 1 2 3	1		3	
Total Route Characteristics Score			—	15	
3 Containment	0 1 2 3	1	—	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	
Total Waste Characteristics Score			19	26	
5 Targets					3.5
Ground Water Use	0 1 2 (3)	(3)	9	9	
Distance to Nearest Well/Population Served	0 4 6 8 10 / 12 16 18 20 / 24 30 32 (35) 40	1	35	40	
Total Targets Score			44	49	
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			37620	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	65.62		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

AP
5/22/84

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 (45)	1	45	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	0 1 2 3	1		3	
1-yr. 24-hr. Rainfall	0 1 2 3	1		3	
Distance to Nearest Surface Water	0 1 2 3	2		6	
Physical State	0 1 2 3	1		3	
Total Route Characteristics Score			—	15	
3 Containment	0 1 2 3	1	—	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	
Total Waste Characteristics Score			19	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	(3)	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2		6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1		40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			5130	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{SW} =	7.97		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

AP
5/22/84

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location:					
Sampling Protocol:					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score			20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score			39	
[4] Multiply [1] x [2] x [3]			0	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

AP 5/22/84

	S	S^2
Groundwater Route Score (S_{gw})	65.62	4305.9844
Surface Water Route Score (S_{sw})	7.97	63.5209
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		4369.5053
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		66.1022 AP ~~65.62~~
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		38.21 AP ~~38.77~~

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1	1	3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score			1	20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1	5	5	
Distance to Nearest Building	0 1 2 3	1	3	3	
Distance to Sensitive Environment	0 1 2 3	1	0	3	
Land Use	0 1 2 3	1	3	3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1	1	5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1	1	5	
Total Targets Score			13	24	
4 Multiply 1 x 2 x 3			0	1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =	0		

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	0 45	1	45	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 3	1		3	8.2
3 Containment	0 15	1		15	8.3
4 Waste Characteristics Toxicity	0 1 2 3	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 3 4 5	4	4	20	
Distance to a Critical Habitat	0 1 2 3	4	0	12	
Total Targets Score			4	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			2700	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} =	12.5		

FIGURE 12
DIRECT CONTACT WORK SHEET

Not QA'd
AP

FIT QUALITY ASSURANCE TEAM

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Findett Corporation

LOCATION: St. Charles, Missouri

DATE SCORED: 5/15/84

PERSON SCORING: Diana J. Bailey

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):
EPA's regional files and FIT report as well as Findett reports.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

COMMENTS OR QUALIFICATIONS: Hazards ranked on past presence of PCB's and 1,1,1-trichlorethylene or 1,1,1-trichloroctane as documented in above mentioned sources.

QA'd
A Pa
5/22/84

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum): EPA monitoring well #1 samples taken

August 10, 1983
Sample AQ6008
Water at 39 ft., in borehole
13.0 ppm PCV and volatile organics

Sample AQ6009
27.5 feet gray clay in boreholes
PCB 30.0 ppm

Rationale for attributing the contaminants to the facility: Facility reprocessed PCB containing heat medium and hydraulic fluids and subsequently disposed of waste from reprocessing procedures in the quench pond.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

Depth from the ground surface to the lowest point of waste disposal/ storage:

AP 5/22/84

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

Mean annual lake or seasonal evaporation (list months for seasonal):

Net precipitation (subtract the above figures):

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Permeability associated with soil type:

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

* * *

AP 5/22/84

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Method with highest score:

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated: PCB, HRS users manual

Toxicity = 3
persistance = 3

Compound with highest score:

Value = 18

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Because of observed release assuming a score of 1.

Basis of estimating and/or computing waste quantity:

In February 1981 Findett excavated approximately 3000 cubic feet of soil and sludge from the quench pond, and area under Administrative Order (Docket #VII-80-VII-37) under Federal Clean Water Act, containing PCBs.

* * *

AP 5/24/84

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:
Elmpoint well field with six (6) shallow city wells (soon to be seven (7)).
Information from a topo map, well logs and telephone conversations with City of St. Charles water supply manager 5/16/84.

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Approximately 2000 feet; information from 7.5 topo map of Kampville, MO 1974.

Distance to above well or building:

Approximately 2000 feet to nearest well, water supply's office next to well.

From telephone conversation 5/16/84 with City of St. Charles water supply manager.

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

City of St. Charles has 15,000 service connections that x 3.8 people (HRS) = 57,000 people using city water. As per call of 5/16/84 with the City of St. Charles water supply manager

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

None

Total population served by ground water within a 3-mile radius:

Approximately 57,000 people.

AP 5/22/84

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

PCB

Rationale for attributing the contaminants to the facility:
Discharge ditch sampling before and after MO NPDES permit (Aug. 1976)
June 11, 1976
July 23, 1976
November 22, 1976
July-Aug. 1977

Photos showing site under water during flood.

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Name/description of nearest downslope surface water:

Average slope of terrain between facility and above-cited surface water body in percent:

Is the facility located either totally or partially in surface water?

AP
5/22/84

Is the facility completely surrounded by areas of higher elevation?

1-Year 24-Hour Rainfall in Inches

Distance to Nearest Downslope Surface Water

Physical State of Waste

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Method with highest score:

AP
5/22/84

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated PCB
from HRS users manual
toxicity = 3
persistance = 3

Compound with highest score:
Total 18

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Same as groundwater

Basis of estimating and/or computing waste quantity:

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Within one mile Cole Creek (NE), which drains into Dardeen Creek which is within two miles of site (NW). Dardeen Creek drains into the Mississippi River 3-3.5 miles (N).
Human activities include: privately-owned duck hunting/wildlife areas,
local residents fishing,
frog gigging

From 7.5 topo map of Kampville, MO. and letter of 10/6/83 with Mo. Dept. of Conservation.

A P
5/22/84

Is there tidal influence?

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

AP
5/22/84

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

Total population served:

Name/description of nearest of above water bodies:

Cole Creek
Dardeen Creek
Mississippi River

Distance to above-cited intakes, measured in stream miles.

AP
5/22/84

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

None

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

AP
5/22/84

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

FIRE AND EXPLOSION

1. CONTAINMENT

Hazardous substances present:

none

Type of containment, if applicable:

N/A

* * *

2. WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

none

Ignitability

Compound used:

N/A

Reactivity

Most reactive compound:

N/A

Incompatibility

Most incompatible pair of compounds:

N/A

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

N/A

Basis of estimating and/or computing waste quantity:

N/A

* * *

3 TARGETS

Distance to Nearest Population

N/A

Distance to Nearest Building

N/A

Distance to Sensitive Environment

Distance to wetlands:

N/A

Distance to critical habitat:

N/A

Land Use

Distance to commercial/industrial area, if 1 mile or less:

N/A

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

N/A

Distance to residential area, if 2 miles or less:

N/A

Distance to agricultural land in production within past 5 years, if 1 mile or less:

N/A

Distance to prime agricultural land in production within past 5 yearss, if 2 miles or less:

N/A

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

N/A

Population Within 2-Mile Radius

N/A

Buildings Within 2-Mile Radius

N/A

DIRECT CONTACT

1. OBSERVED INCIDENT

Date, location, and pertinent details of incident:

1963 - Firidett site - valve broke off tank spilling 1,1,1- trichloro~~ethyl~~ethylene or trichloroethane and temporarily blinded M. Tegethoff president of Firidett Corp.

* * *

2. ACCESSIBILITY

Describe type of barrier(s):

fence with gate on road leading to site.

* * *

3. CONTAINMENT

Type of containment, if applicable:

N/A

* * *

4. WASTE CHARACTERISTICS

Toxicity

Compounds evaluated: PCE

1,1,1- trichlorethylene - may produce severe physical impairment which may be reversed over a period of time - Level 2 - Sax

Compound with highest score:

1,1,1 - trichloroethylene

PCE

* * *

5. TARGETS

Population within one-mile radius

1-100

Distance to critical habitat (of endangered species)

none within 1 mile